

Abstract of the Disclosure

Disclosed is a 3-grid neutral beam source used for etching a semiconductor device. The 3-grid neutral beam source includes a plasma generating chamber, a grid assembly including first to third grids, which are sequentially overlapped with each other by interposing an insulation material
5 therebetween for obtaining a great amount of ion flux at a low ion energy, and a reflective member for converting an ion beam into a neutral beam by reflecting the ion beam. The semiconductor device is prevented from being damaged due to reduced kinetic energy of ions, and an etch rate of the semiconductor device is improved.